



December 22, 2017

Mr. Heath Smith
EPA On-Scene Coordinator
U.S. Environmental Protection Agency
212 Little Bussen Drive
Fenton, Missouri 63026

**Subject: Emergency Response Trip Report and Removal Site Evaluation
 Park Warehouse Fire Site, St. Louis, Missouri
 U.S. EPA Region 7 START 4, Contract No. EP-S7-13-06, Task Order No. 0203
 Task Monitor: Heath Smith, EPA On-Scene Coordinator**

Dear Mr. Smith:

Tetra Tech, Inc. (Tetra Tech) is submitting the attached Emergency Response Trip Report and Removal Site Evaluation regarding the Park Warehouse Fire site in St. Louis, Missouri. If you have any questions or comments, please contact the Project Manager at (314) 443-1365.

Sincerely,

A handwritten signature in black ink, appearing to read 'Greg Blattner'.

Greg Blattner, CHMM
START Project Manager

A handwritten signature in blue ink, appearing to read 'Ted Faile'.

Ted Faile, PG, CHMM
START Program Manager

Enclosures

cc: Debra Dorsey, START Project Officer (cover letter only)

**EMERGENCY RESPONSE TRIP REPORT AND REMOVAL SITE EVALUATION
PARK WAREHOUSE FIRE, ST. LOUIS, MISSOURI**

**Superfund Technical Assessment and Response Team (START) 4 Contract
Contract No. EP-S7-13-06, Task Order No. 0203**

Prepared For:

U.S. Environmental Protection Agency
Region 7
Superfund Division
11201 Renner Boulevard
Lenexa, Kansas 66219

December 22, 2017

Prepared By:

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1.0 INCIDENT

Tetra Tech, Inc. (Tetra Tech) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division, under Superfund Technical Assessment and Response Team (START) 4 Contract Number EP-S7-13-06, Task Order 0203, to assist with an emergency response and removal site evaluation (RSE) to address threats to human health presented by asbestos in fire-damaged building materials originating from 3937 Park Avenue in St. Louis, Missouri. The site, referred to as Park Warehouse Services, was the scene of a major five-alarm fire on November 15, 2017, that destroyed the warehouse and its contents. At the time of the fire, the warehouse stored a wide array of bulk materials, including plastic, rubber, Styrofoam, citronella, paper, and wood products. Cause of the fire is unknown.

EPA and START arrived at the on-scene command post at 2000 hours (8 p.m.) November 15, 2017, the night of the fire, to offer assistance and perform a limited off-site assessment of conditions downwind of the fire.

On November 16, 2017, EPA received a Request for Federal Assistance (RFA) from the Missouri Department of Natural Resources (MDNR). The RFA was initiated by the City of St. Louis Department of Health (SLDH) and specifically asked that EPA conduct an asbestos assessment of the impacted area. EPA and START conducted the assessment on November 17-18, 2017.

START Project Manager (PM) duties were assumed by Greg Blattner, who was assisted by START Member (SM) James Christopher for on-site activities. Wendell Hall of MDNR also assisted with on-site activities. The EPA Region 7 On-Scene Coordinator (OSC) was Heath Smith, who was assisted by OSC John Frey.

2.0 SITE LOCATION AND DESCRIPTION

The Park Warehouse Fire property is at 3937 Park Avenue in St. Louis, Missouri. The warehouse building was built in 1905, encompassing approximately 61,500 square feet (Geo St. Louis 2017). Geographic coordinates at the warehouse are 38.622088 degrees north latitude and 90.245896 degrees west longitude (see Appendix A, Figure 1). The focus of the assessment was a residential area southeast of the site that encompassed approximately 0.07 square mile (45 acres), bounded north by Park Avenue, east by Cardinal Glennon Way, south by Lafayette Avenue, and west by Lawrence Street. Surrounding areas include commercial properties to the north, Cardinal Glennon Children's Hospital and St. Louis University Hospital to the east, residential properties to the south, and commercial, railroad, and residential properties to the west.

3.0 EMERGENCY RESPONSE ACTIVITIES

Emergency response activities occurred the night of November 15, 2017. START assistance was requested by EPA to provide limited real-time air monitoring near and downwind of the smoldering building. Photographic documentation of site activities is in Appendix B.

EPA and START personnel mobilized to the site at approximately 2000 hours on November 15, 2017, intending to offer support to the St. Louis Fire Department. From discussions at the incident command post, it was learned that the fire department had performed air monitoring earlier in the day, obtaining measurements of oxygen, lower explosion limit (LEL) conditions, carbon monoxide (CO), and volatile organic compounds (VOC). With respect to those parameters, no significant readings were detected off site.

In coordination with on-scene command staff, EPA and START used a RAE Systems MultiRAE Pro multi-gas detector to obtain real-time measurements east of the site, downwind of the smoldering building, in order to determine if any immediate threats were posed to the surrounding population. START took measurements of oxygen, LEL conditions, CO, hydrogen sulfide (H₂S), and VOCs at 10 separate locations downwind and one location upwind (west) of the smoke plume. Table 1 lists the air monitoring results from within and outside the smoke plume.

TABLE 1

**SUMMARY OF AIR MONITORING RESULTS FROM SMOKE PLUME
PARK WAREHOUSE FIRE SITE, ST. LOUIS, MISSOURI**

Time	Latitude (°N)	Longitude (°W)	Oxygen (%)	LEL (%)	CO (ppm)	H₂S (ppm)	VOCs (ppb)	Smoke Level
21:05	38.626041	-90.237216	20.9	0	0	0.0	40*	Moderate
21:09	38.621680	-90.238458	20.9	0	0	0.0	30*	Moderate
21:14	38.619342	-90.239665	20.9	0	0	0.0	0	Very light
21:23	38.612917	-90.236245	20.9	0	0	0.0	0	Clear
21:30	38.617027	-90.232026	20.9	0	0	0.0	0	Very light
21:35	38.621276	-90.231384	20.9	0	0	0.0	0	Very light
21:38	38.620328	-90.235139	20.9	0	0	0.0	0	Moderate
21:43	38.621547	-90.241744	20.9	0	0	0.0	0	Heavy
21:47	38.620214	-90.241966	20.9	0	0	0.0	0	Heavy
22:00	38.624556	-90.253631	20.9	0	0	0.0	0	Clear
22:30	38.621483	-90.244312	20.9	0	13	0.0	230	Very heavy

Notes:

* Reading taken shortly after instrument start-up at gas station while tanker truck was on site delivering fuel (reading likely due to residual fuel vapors introduced to the instrument).

CO Carbon monoxide
H₂S Hydrogen sulfide
LEL Lower explosive limit
ppb Parts per billion
ppm Parts per million
VOC Volatile organic compound
°N Degrees north
°W Degrees west
% Percent

Air monitoring results did not reveal any significant impacts from the smoke plume migrating off site. Highest detections of VOCs occurred in the area of heaviest smoke one-half block from the smoldering building (see Appendix A, Figure 2). The highest reading for CO of 13 parts per million (ppm) was recorded at the same location, and was below the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 50 ppm.

4.0 REMOVAL SITE EVALUATION

On November 17, 2017, EPA requested assistance from START to collect debris samples from the building and on the street near the building to determine if asbestos was present in structural materials ejected during the fire. On the morning of November 17, 2017, START and EPA visually assessed impacted areas at/near the Park Warehouse site, and collected 21 debris samples from the parking lot, collapsed wall material on the east side of the warehouse, and along Park Avenue near the building (see Appendix B, Photos 4-8). Pertinent data were recorded for each sample in the field logbook, including sample number, location, date, and time. These 21 samples were delivered to Precision Analysis, Inc., in Florissant, Missouri, for same-day analysis for asbestos via polarized light microscopy (PLM) with dispersion staining, in accordance with EPA Method 600/R-93/116 (EPA 2017).

The following morning (November 18, 2017), OSC Heath Smith and SMs Greg Blattner and James Christopher met with Dorothy Franklin and Wendell Hall of MDNR and the Public Information Officer from SLDH, Harold Bailey. The SLDH Health Services Manager, Jeanine Arrighi, was unable to attend, but was consulted by Harold Bailey via conference. The purpose of the meeting was to discuss expansion of the sampling area to include residential neighborhoods southeast of the Park Warehouse site that had been in the path of the smoke plume. The residential areas were then assessed by walking along public right-of-way, visually searching for fire-related debris, and collecting samples of debris for laboratory analysis. The search area was bounded north by Park Avenue, east by Cardinal Glennon Way, south by Lafayette Avenue, and west by Lawrence Street (see Appendix A, Figure 3). During that assessment, 59 additional debris samples were collected from public right-of-way within the residential neighborhoods (see Appendix C, Photos 9-98). Pertinent data were recorded for each sample in the field logbook, including sample number, location, date, and time. The impacted area where fire-related debris was observed encompassed approximately 0.07 square mile, or 45 acres. These 59 samples were delivered to Precision Analysis, Inc., in Florissant, Missouri, for quick-turnaround analysis for asbestos via PLM with dispersion staining, in accordance with EPA Method 600/R-93/116.

5.0 ANALYTICAL RESULTS

Collection of 80 debris samples occurred on November 17 and November 18, 2017, to assess presence of asbestos-containing material in fire-related debris, including building materials. Debris samples were analyzed for asbestos via PLM with dispersion staining in accordance with test method EPA/600/R-93/116. Three samples of what appeared to be roofing material collected near the Park Warehouse building in the parking lot and from the collapsed wall on the south side of the building tested positive for chrysotile asbestos (up to 20 percent [%]). Each of these samples was collected from relatively heavy material that had fallen from the building and not likely to have been ejected off site due to the fire. The other 77 samples, collected from the collapsed wall of the building, along Park Street near the building, and within residential neighborhoods southeast of the building, were all non-detect for asbestos (see Appendix A, Figure 3).

Table 2 below summarizes asbestos results from the debris samples. Analytical data and chain-of-custody records regarding the debris samples are in Appendix C.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FROM DEBRIS SAMPLES
PARK WAREHOUSE FIRE SITE, ST. LOUIS, MISSOURI

Sample ID	Date Sampled	Latitude (°N)	Longitude (°W)	Lab Result*
WF-001	11/17/2017	38.62167	-90.24444	Non-detect
WF-002	11/17/2017	38.62172	-90.24443	Non-detect
WF-003	11/17/2017	38.62164	-90.24440	Non-detect
WF-004	11/17/2017	38.62175	-90.24440	Non-detect
WF-005	11/17/2017	38.62175	-90.24440	Non-detect
WF-006	11/17/2017	38.62143	-90.24461	Non-detect
WF-007	11/17/2017	38.62129	-90.24457	Non-detect
WF-008	11/17/2017	38.62143	-90.24461	Non-detect
WF-009	11/17/2017	38.62146	-90.24488	Non-detect
WF-010	11/17/2017	38.62146	-90.24488	Non-detect
WF-011	11/17/2017	38.62148	-90.24499	Non-detect
WF-012	11/17/2017	38.62150	-90.24515	Non-detect
WF-013	11/17/2017	38.62147	-90.24516	Non-detect
WF-014	11/17/2017	38.62132	-90.24511	Non-detect
WF-015	11/17/2017	38.62132	-90.24526	Non-detect
WF-016	11/17/2017	38.62134	-90.24548	Non-detect
WF-017	11/17/2017	38.62145	-90.24576	15-20% Chrysotile

TABLE 2 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FROM DEBRIS SAMPLES
PARK WAREHOUSE FIRE SITE, ST. LOUIS, MISSOURI**

Sample ID	Date Sampled	Latitude (°N)	Longitude (°W)	Lab Result*
WF-018	11/17/2017	38.62144	-90.24589	10-15% Chrysotile
WF-019	11/18/2017	38.62148	-90.24604	Non-detect
WF-020	11/18/2017	38.62148	-90.24606	Non-detect
WF-021	11/18/2017	38.62165	-90.24637	5-10% Chrysotile
WF-T1-001	11/18/2017	38.62121	-90.24416	Non-detect
WF-T1-002	11/18/2017	38.62121	-90.24391	Non-detect
WF-T1-003	11/18/2017	38.62118	-90.24360	Non-detect
WF-T1-004	11/18/2017	38.62115	-90.24324	Non-detect
WF-T1-005	11/18/2017	38.62091	-90.24187	Non-detect
WF-T1-006	11/18/2017	38.62065	-90.24192	Non-detect
WF-T1-007	11/18/2017	38.62060	-90.24233	Non-detect
WF-T1-008	11/18/2017	38.62073	-90.24297	Non-detect
WF-T1-009	11/18/2017	38.62081	-90.24338	Non-detect
WF-T1-010	11/18/2017	38.62090	-90.24376	Non-detect
WF-T1-011	11/18/2017	38.62026	-90.24213	Non-detect
WF-T1-012	11/18/2017	38.62028	-90.24234	Non-detect
WF-T1-013	11/18/2017	38.62032	-90.24269	Non-detect
WF-T1-014	11/18/2017	38.62040	-90.24338	Non-detect
WF-T1-015	11/18/2017	38.62044	-90.24387	Non-detect
WF-T1-016	11/18/2017	38.62029	-90.24424	Non-detect
WF-T1-017	11/18/2017	38.62026	-90.24379	Non-detect
WF-T1-018	11/18/2017	38.62020	-90.24311	Non-detect
WF-T1-019	11/18/2017	38.62015	-90.24252	Non-detect
WF-T1-020	11/18/2017	38.62013	-90.24215	Non-detect
WF-T1-021	11/18/2017	38.61976	-90.24222	Non-detect
WF-T1-022	11/18/2017	38.61979	-90.24237	Non-detect
WF-T1-023	11/18/2017	38.61990	-90.24335	Non-detect
WF-T1-024	11/18/2017	38.61990	-90.24369	Non-detect
WF-T1-025	11/18/2017	38.62009	-90.24432	Non-detect
WF-T1-026	11/18/2017	38.61913	-90.24159	Non-detect
WF-T1-027	11/18/2017	38.61907	-90.24065	Non-detect
WF-T1-028	11/18/2017	38.61900	-90.23973	Non-detect
WF-T1-029	11/18/2017	38.61928	-90.24142	Non-detect
WF-T1-030	11/18/2017	38.61874	-90.24038	Non-detect
WF-T1-031	11/18/2017	38.61839	-90.24155	Non-detect
WF-T1-032	11/18/2017	38.61959	-90.24411	Non-detect
WF-T1-033	11/18/2017	38.61932	-90.24346	Non-detect
WF-T2-001	11/18/2017	38.61956	-90.24497	Non-detect
WF-T2-002	11/18/2017	38.61947	-90.24522	Non-detect

TABLE 2 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FROM DEBRIS SAMPLES
PARK WAREHOUSE FIRE SITE, ST. LOUIS, MISSOURI**

Sample ID	Date Sampled	Latitude (°N)	Longitude (°W)	Lab Result*
WF-T2-003	11/18/2017	38.61971	-90.24472	Non-detect
WF-T2-004	11/18/2017	38.62001	-90.24479	Non-detect
WF-T2-005	11/18/2017	38.62037	-90.24546	Non-detect
WF-T2-006	11/18/2017	38.62044	-90.24494	Non-detect
WF-T2-007	11/18/2017	38.62045	-90.24439	Non-detect
WF-T2-008	11/18/2017	38.62061	-90.24438	Non-detect
WF-T2-009	11/18/2017	38.62068	-90.24438	Non-detect
WF-T2-010	11/18/2017	38.62093	-90.24558	Non-detect
WF-T2-011	11/18/2017	38.61918	-90.24191	Non-detect
WF-T2-012	11/18/2017	38.61934	-90.24171	Non-detect
WF-T2-013	11/18/2017	38.61916	-90.24103	Non-detect
WF-T2-014	11/18/2017	38.61927	-90.24096	Non-detect
WF-T2-015	11/18/2017	38.61894	-90.23988	Non-detect
WF-T2-016	11/18/2017	38.61932	-90.23970	Non-detect
WF-T2-017	11/18/2017	38.61966	-90.24104	Non-detect
WF-T2-018	11/18/2017	38.61786	-90.24183	Non-detect
WF-T2-019	11/18/2017	38.61906	-90.24502	Non-detect
WF-T2-020	11/18/2017	38.61939	-90.24208	Non-detect
WF-T2-021	11/18/2017	38.61959	-90.24210	Non-detect
WF-T2-022	11/18/2017	38.61967	-90.24210	Non-detect
WF-T2-023	11/18/2017	38.61937	-90.24232	Non-detect
WF-T2-024	11/18/2017	38.61847	-90.24258	Non-detect
WF-T2-025	11/18/2017	38.61867	-90.24228	Non-detect
WF-T2-026	11/18/2017	38.61886	-90.24220	Non-detect

Notes:

* Detection limit is 1%

°N Degrees north

°W Degrees west

% Percent

6.0 SUMMARY

Tetra Tech was tasked by EPA, under the START 4 contract, to assist with an emergency response and RSE to address threats to human health presented by asbestos in fire-damaged building materials originating from 3937 Park Avenue in St. Louis, Missouri. The site, referred to as Park Warehouse Services, was the scene of a major five-alarm fire on November 15, 2017, which destroyed the warehouse and its contents. At the time of the fire, the warehouse stored a wide array of bulk materials including plastic, rubber, Styrofoam, citronella, paper, and wood products. Cause of the fire is unknown.

EPA and START responded on the night of the fire to assist local fire departments with air monitoring. No dangerous levels of hazardous gases were detected within the smoke plume during the night of the fire. The intense fire ejected ash and debris from the building that fell across adjacent residential neighborhoods southeast of the site. Subsequent to the fire, on November 16, 2017, EPA received an RFA from MDNR. The RFA was initiated by the City of St. Louis Department of Health and specifically asked that EPA conduct an asbestos assessment of the impacted area. EPA and START conducted the assessment on November 17-18, 2017.

Collection of 80 debris samples occurred on November 17 and November 18, 2017, to assess presence of asbestos-containing material in fire-related debris, including building materials that had fallen into public right-of-way. Debris samples were analyzed for asbestos via PLM with dispersion staining in accordance with test method EPA/600/R-93/116. Three samples of what appeared to be roofing material collected near the Park Warehouse building in the parking lot and from a collapsed wall on the south side of the building tested positive for chrysotile asbestos (up to 20%). Each of these samples was collected from relatively heavy material not likely to have been ejected far from the warehouse during the fire. Analytical results from the other 77 samples, collected from the collapsed wall of the building, along Park Street near the building, and within residential neighborhoods southeast of the building, indicated no detectible asbestos present.

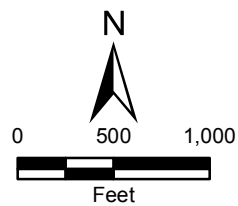
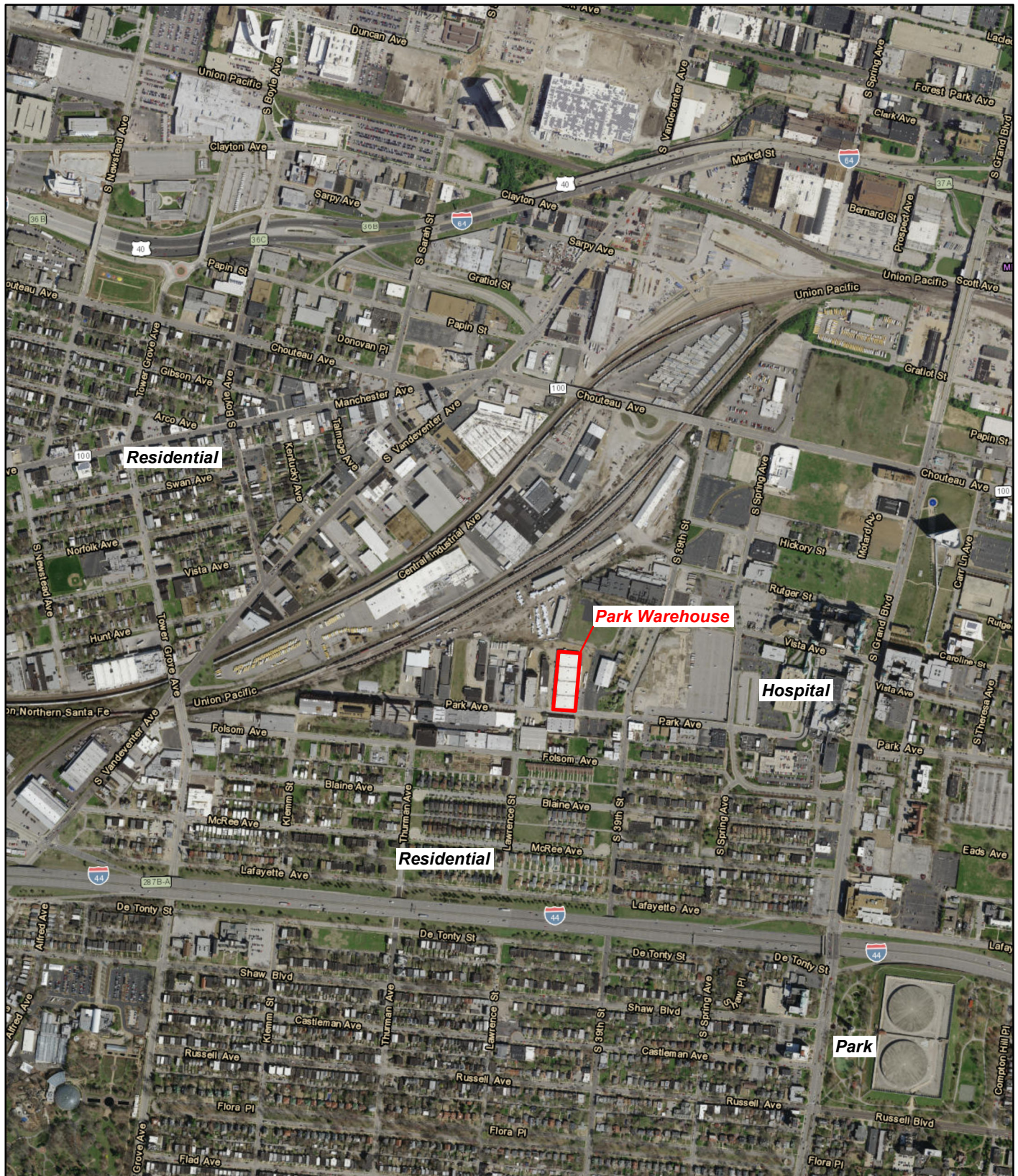
Due to the limited quantity of hazardous material found at the Park Warehouse Fire site and in surrounding residential neighborhoods, a removal action does not appear warranted. A completed Removal Site Evaluation form is in Appendix D.

7.0 REFERENCES

- Geo St. Louis. 2017. Geo St. Louis Guide to Geospatial Data for the City of St. Louis. December.
<http://stlc.in.missouri.org/citydata/newdesign/buildinginfo.cfm?handle=14959000040&ParcelID=495900040>
- U.S. Environmental Protection Agency (EPA). 2017. Polarized Light Microscopy (EPA 600-R-93-116): Method for the Determination of Asbestos in Bulk Building Materials (PDF). December.
<https://semspub.epa.gov/work/HQ/177098.pdf>

APPENDIX A

FIGURES



Park Warehouse Fire
3937 Park Avenue
St. Louis, Missouri

Figure 1
Site Location Map



Source: The source of this map image is Esri, used by EPA with Esri's permission.

Date: 12/14/2017

Drawn By: Nick Wiederholt

Project No: X9025.18.0203.000

X:\G\9025\0203\0000\Project\mxd\Figure 1_aerial.mxd



Legend

Debris sample location

- Asbestos detected
- Asbestos not detected
- Debris assessment area (residential)
- Facility boundary

0 125 250

Feet

N

Source: The source of this map image is Esri, used by EPA with Esri's permission.

Park Warehouse Fire
3937 Park Avenue
St. Louis, Missouri

Figure 3
Debris Sample Locations Map

TETRA TECH

Date: 12/14/2017 Drawn By: Nick Wiederholt Project No: X9025.18.0203.000

APPENDIX B

PHOTOGRAPHIC DOCUMENTATION

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 1	Date: 11/15/2017	Time: 20:35
Photographer: Greg Blattner		Direction: Southwest
Latitude: 38.625105		Longitude: -90.242392
Description: This photograph shows the smoke plume from Park Warehouse fire.		



Photo No.: 2	Date: 11/15/2017	Time: 22:15
Photographer: Heath Smith		Direction: South
Latitude: 38.627002	Longitude: -90.243703	
Description: This photograph shows the smoke plume from Park Warehouse fire.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 3	Date: 11/15/2017	Time: 22:30
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.621460		Longitude: -90.244454
Description: This photograph shows the St. Louis Fire Department Mobile Command Post.		



Photo No.: 4	Date: 11/17/2017	Time: 16:46
Photographer: James Christopher		Direction: North
Latitude: 38.621570		Longitude: -90.246346
Description: This photograph shows debris in the parking lot next to Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri

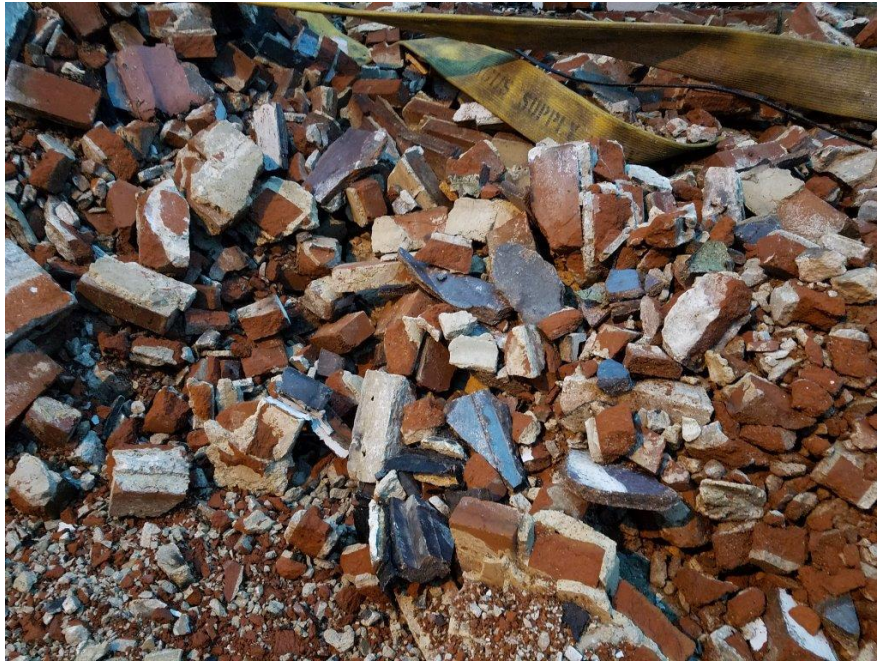


Photo No.: 5	Date: 11/17/2017	Time: 16:46
Photographer: James Christopher		Direction: North
Latitude: 38.621464		Longitude: -90.246018
Description: This photograph shows debris from collapsed wall on south side of Park Warehouse.		



Photo No.: 6	Date: 11/17/2017	Time: 16:46
Photographer: James Christopher		Direction: North
Latitude: 38.621464		Longitude: -90.246018
Description: This photograph shows debris from collapsed wall on south side of Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 7	Date: 11/17/2017	Time: 16:47
Photographer: James Christopher		Direction: North
Latitude: 38.621464		Longitude: -90.246018
Description: This photograph shows debris from collapsed wall on south side of Park Warehouse.		



Photo No.: 8	Date: 11/17/2017	Time: 16:47
Photographer: James Christopher		Direction: North
Latitude: 38.621464		Longitude: -90.246018
Description: This photograph shows debris from collapsed wall on south side of Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 9	Date: 11/18/2017	Time: 07:49
Photographer: Heath Smith		Direction: North
Latitude: 38.619590		Longitude: -90.244997
Description: This photograph shows debris sample WF-T2-001 collected from residential neighborhood near Park Warehouse..		



Photo No.: 10	Date: 11/18/2017	Time: 07:59
Photographer: Heath Smith		Direction: South
Latitude: 38.619512	Longitude: -90.245186	
Description: This photograph shows debris sample WF-T2-002 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 11	Date: 11/18/2017	Time: 08:04
Photographer: Heath Smith		Direction: East
Latitude: 38.619646		Longitude: -90.244573
Description: This photograph shows debris sample WF-T2-003 collected from residential neighborhood near Park Warehouse.		



Photo No.: 12	Date: 11/18/2017	Time: 08:06
Photographer: Heath Smith		Direction: North
Latitude: 38.620015		Longitude: -90.244859
Description: This photograph shows debris sample WF-T2-004 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 13	Date: 11/18/2017	Time: 08:18
Photographer: Heath Smith		Direction: Southwest
Latitude: 38.620420		Longitude: -90.245549
Description: This photograph shows debris sample WF-T2-005 collected from residential neighborhood near Park Warehouse.		



Photo No.: 14	Date: 11/18/2017	Time: 08:22
Photographer: Heath Smith		Direction: Northwest
Latitude: 38.620479	Longitude: -90.244926	
Description: This photograph shows debris sample WF-T2-006 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 15	Date: 11/18/2017	Time: 08:29
Photographer: Heath Smith		Direction: North
Latitude: 38.620500		Longitude: -90.244431
Description: This photograph shows debris sample WF-T2-007 collected from residential neighborhood near Park Warehouse.		



Photo No.: 16	Date: 11/18/2017	Time: 08:31
Photographer: Heath Smith		Direction: Southeast
Latitude: 38.620732		Longitude: -90.244481
Description: This photograph shows debris sample WF-T2-008 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 17	Date: 11/18/2017	Time: 08:34
Photographer: Heath Smith		Direction: Southeast
Latitude: 38.620630		Longitude: -90.244394
Description: This photograph shows debris sample WF-T2-009 collected from residential neighborhood near Park Warehouse.		



Photo No.: 18	Date: 11/18/2017	Time: 08:39
Photographer: Heath Smith		Direction: Southwest
Latitude: 38.620953	Longitude: -90.245585	
Description: This photograph shows debris sample WF-T2-010 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 19	Date: 11/18/2017	Time: 09:13
Photographer: Heath Smith		Direction: Southeast
Latitude: 38.619139		Longitude: -90.241893
Description: This photograph shows debris sample WF-T2-011 collected from residential neighborhood near Park Warehouse.		



Photo No.: 20	Date: 11/18/2017	Time: 09:17
Photographer: Heath Smith		Direction: South
Latitude: 38.619327		Longitude: -90.241720
Description: This photograph shows debris sample WF-T2-012 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 21	Date: 11/18/2017	Time: 09:20
Photographer: Heath Smith		Direction: North
Latitude: 38.619248		Longitude: -90.241218
Description: This photograph shows debris sample WR-T2-013 collected from residential neighborhood near Park Warehouse.		



Photo No.: 22	Date: 11/18/2017	Time: 09:22
Photographer: Heath Smith		Direction: North
Latitude: 38.619289		Longitude: -90.240951
Description: This photograph shows debris sample WF-T2-014 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 23	Date: 11/18/2017	Time: 09:28
Photographer: Heath Smith		Direction: West
Latitude: 38.619014		Longitude: -90.239905
Description: This photograph shows debris sample WF-T2-015 collected from residential neighborhood near Park Warehouse.		



Photo No.: 24	Date: 11/18/2017	Time: 09:33
Photographer: Heath Smith		Direction: North
Latitude: 38.619322		Longitude: -90.239853
Description: This photograph shows debris sample WF-T2-016 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 25	Date: 11/18/2017	Time: 09:38
Photographer: Heath Smith		Direction: North
Latitude: 38.619589		Longitude: -90.241091
Description: This photograph shows debris sample WF-T2-017 collected from residential neighborhood near Park Warehouse.		



Photo No.: 26	Date: 11/18/2017	Time: 10:13
Photographer: Heath Smith		Direction: North
Latitude: 38.617817		Longitude: -90.241886
Description: This photograph shows debris sample WF-T2-018 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 27	Date: 11/18/2017	Time: 10:49
Photographer: Heath Smith		Direction: South
Latitude: 38.619065		Longitude: -90.245019
Description: This photograph shows debris sample WF-T2-019 collected from residential neighborhood near Park Warehouse.		



Photo No.: 28	Date: 11/18/2017	Time: 10:55
Photographer: Heath Smith		Direction: North
Latitude: 38.619435		Longitude: -90.242288
Description: This photograph shows debris sample WF-T2-020 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 29	Date: 11/18/2017	Time: 10:57
Photographer: Heath Smith		Direction: East
Latitude: 38.619554		Longitude: -90.242185
Description: This photograph shows debris sample WF-T2-021 collected from residential neighborhood near Park Warehouse.		



Photo No.: 30	Date: 11/18/2017	Time: 10:59
Photographer: Heath Smith		Direction: East
Latitude: 38.619690		Longitude: -90.242090
Description: This photograph shows debris sample WF-T2-022 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 31	Date: 11/18/2017	Time: 11:02
Photographer: Heath Smith		Direction: East
Latitude: 38.619318	Longitude: -90.242329	
Description: This photograph shows debris sample WF-T2-023 collected from residential neighborhood near Park Warehouse.		



Photo No.: 32	Date: 11/18/2017	Time: 11:05
Photographer: Heath Smith		Direction: East
Latitude: 38.618965		Longitude: -90.242477
Description: This photograph shows debris sample WF-T2-024 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 33	Date: 11/18/2017	Time: 11:09
Photographer: Heath Smith		Direction: North
Latitude: 38.618699		Longitude: -90.242397
Description: This photograph shows debris sample WF-T2-025 collected from residential neighborhood near Park Warehouse.		



Photo No.: 34	Date: 11/18/2017	Time: 11:11
Photographer: Heath Smith		Direction: West
Latitude: 38.618937	Longitude: -90.242270	
Description: This photograph shows debris sample WF-T2-026 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri

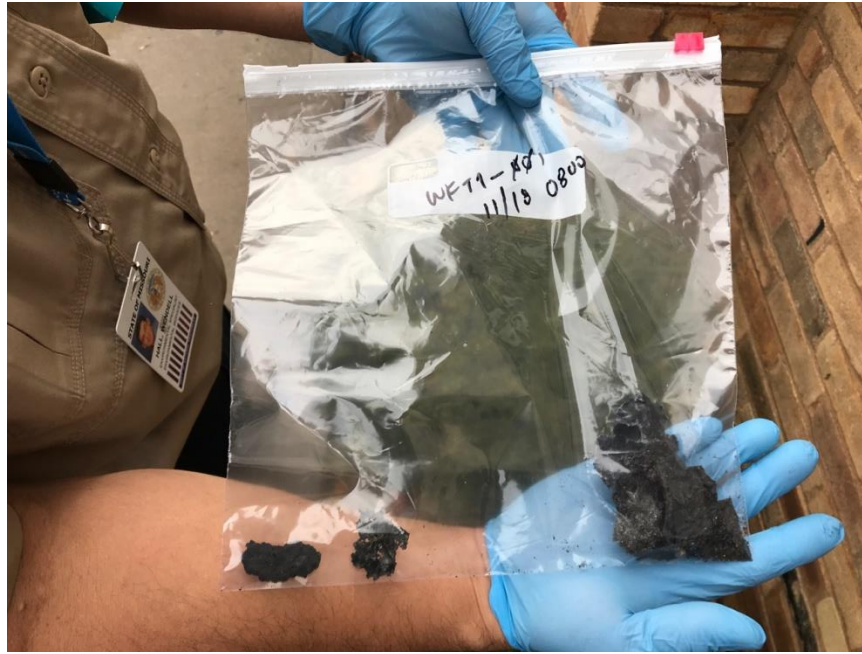


Photo No.: 35	Date: 11/18/2017	Time: 08:00
Photographer: Greg Blattner		Direction: South
Latitude: 38.62121		Longitude: -90.24416
Description: This photograph shows debris sample WF-T1-001 collected from residential neighborhood near Park Warehouse.		

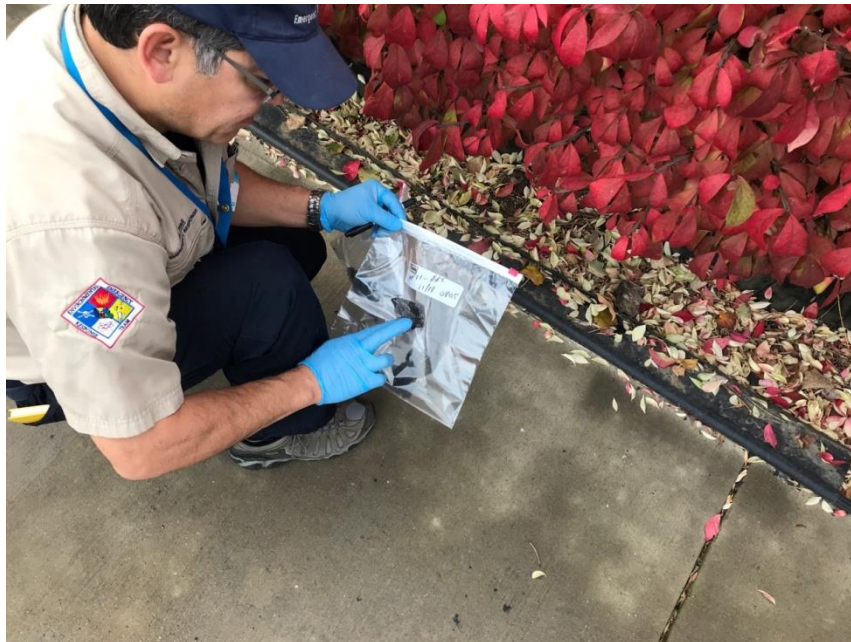


Photo No.: 36	Date: 11/18/2017	Time: 08:05
Photographer: Greg Blattner		Direction: South
Latitude: 38.62121	Longitude: -90.24391	
Description: This photograph shows debris sample WF-T1-002 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 37	Date: 11/18/2017	Time: 08:10
Photographer: Greg Blattner		Direction: South
Latitude: 38.62118		Longitude: -90.24360
Description: This photograph shows debris sample WF-T1-003 collected from residential neighborhood near Park Warehouse.		



Photo No.: 38	Date: 11/18/2017	Time: 08:10
Photographer: Greg Blattner		Direction: South
Latitude: 38.62118		Longitude: -90.24360
Description: This photograph shows debris sample WF-T1-003 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 39	Date: 11/18/2017	Time: 08:12
Photographer: Greg Blattner		Direction: South
Latitude: 38.62115		Longitude: -90.24324
Description: This photograph shows debris sample WF-T1-004 collected from residential neighborhood near Park Warehouse.		



Photo No.: 40	Date: 11/18/2017	Time: 08:12
Photographer: Greg Blattner		Direction: South
Latitude: 38.62115		Longitude: -90.24324
Description: This photograph shows debris sample WF-T1-004 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 41	Date: 11/18/2017	Time: 08:15
Photographer: Greg Blattner		Direction: West
Latitude: 38.62091		Longitude: -90.24187
Description: This photograph shows debris sample WF-T1-005 collected from residential neighborhood near Park Warehouse.		



Photo No.: 42	Date: 11/18/2017	Time: 08:15
Photographer: Greg Blattner		Direction: West
Latitude: 38.62091		Longitude: -90.24187
Description: This photograph shows debris sample WF-T1-005 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 43	Date: 11/18/2017	Time: 08:20
Photographer: Greg Blattner		Direction: North
Latitude: 38.62065	Longitude: -90.24192	
Description: This photograph shows debris sample WF-T1-006 collected from residential neighborhood near Park Warehouse.		



Photo No.: 44	Date: 11/18/2017	Time: 08:20
Photographer: Greg Blattner		Direction: North
Latitude: 38.62065	Longitude: -90.24192	
Description: This photograph shows debris sample WF-T1-006 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 45	Date: 11/18/2017	Time: 08:23
Photographer: Greg Blattner		Direction: North
Latitude: 38.62060		Longitude: -90.24233
Description: This photograph shows debris sample WF-T1-007 collected from residential neighborhood near Park Warehouse.		



Photo No.: 46	Date: 11/18/2017	Time: 08:23
Photographer: Greg Blattner		Direction: North
Latitude: 38.62060	Longitude: -90.24233	
Description: This photograph shows debris sample WF-T1-007 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 47	Date: 11/18/2017	Time: 08:28
Photographer: Greg Blattner		Direction: North
Latitude: 38.62073	Longitude: -90.24297	
Description: This photograph shows debris sample WF-T1-008 collected from residential neighborhood near Park Warehouse.		



Photo No.: 48	Date: 11/18/2017	Time: 08:28
Photographer: Greg Blattner		Direction: North
Latitude: 38.62073		Longitude: -90.24297
Description: This photograph shows debris sample WF-T1-008 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 49	Date: 11/18/2017	Time: 08:30
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62081		Longitude: -90.24338
Description: This photograph shows debris sample WF-T1-009 collected from residential neighborhood near Park Warehouse.		



Photo No.: 50	Date: 11/18/2017	Time: 08:30
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62081		Longitude: -90.24338
Description: This photograph shows debris sample WF-T1-009 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 51	Date: 11/18/2017	Time: 08:35
Photographer: Greg Blattner		Direction: North
Latitude: 38.62090	Longitude: -90.24376	
Description: This photograph shows debris sample WF-T1-010 collected from residential neighborhood near Park Warehouse.		



Photo No.: 52	Date: 11/18/2017	Time: 08:35
Photographer: Greg Blattner		Direction: North
Latitude: 38.62090	Longitude: -90.24376	
Description: This photograph shows debris sample WF-T1-010 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 53	Date: 11/18/2017	Time: 08:43
Photographer: Greg Blattner		Direction: North
Latitude: 38.62026	Longitude: -90.24213	
Description: This photograph shows debris sample WF-T1-011 collected from residential neighborhood near Park Warehouse.		



Photo No.: 54	Date: 11/18/2017	Time: 08:43
Photographer: Greg Blattner		Direction: North
Latitude: 38.62026	Longitude: -90.24213	
Description: This photograph shows debris sample WF-T1-011 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 55	Date: 11/18/2017	Time: 08:45
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62028		Longitude: -90.24234
Description: This photograph shows debris sample WF-T1-012 collected from residential neighborhood near Park Warehouse.		



Photo No.: 56	Date: 11/18/2017	Time: 08:45
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62028	Longitude: -90.24234	
Description: This photograph shows debris sample WF-T1-012 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 57	Date: 11/18/2017	Time: 08:48
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62032	Longitude: -90.24269	
Description: This photograph shows debris sample WF-T1-013 collected from residential neighborhood near Park Warehouse.		



Photo No.: 58	Date: 11/18/2017	Time: 08:48
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62032	Longitude: -90.24269	
Description: This photograph shows debris sample WF-T1-013 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 59	Date: 11/18/2017	Time: 08:50
Photographer: Greg Blattner		Direction: West
Latitude: 38.62040	Longitude: -90.24338	
Description: This photograph shows debris sample WF-T1-014 collected from residential neighborhood near Park Warehouse.		



Photo No.: 60	Date: 11/18/2017	Time: 08:50
Photographer: Greg Blattner		Direction: West
Latitude: 38.62040	Longitude: -90.24338	
Description: This photograph shows debris sample WF-T1-014 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 61	Date: 11/18/2017	Time: 08:55
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62044		Longitude: -90.24387
Description: This photograph shows debris sample WF-T1-015 collected from residential neighborhood near Park Warehouse.		



Photo No.: 62	Date: 11/18/2017	Time: 08:55
Photographer: Greg Blattner		Direction: Northwest
Latitude: 38.62044	Longitude: -90.24387	
Description: This photograph shows debris sample WF-T1-015 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 63	Date: 11/18/2017	Time: 09:00
Photographer: Greg Blattner		Direction: East
Latitude: 38.62029	Longitude: -90.24424	
Description: This photograph shows debris sample WF-T1-016 collected from residential neighborhood near Park Warehouse.		



Photo No.: 64	Date: 11/18/2017	Time: 09:00
Photographer: Greg Blattner		Direction: East
Latitude: 38.62029		Longitude: -90.24424
Description: This photograph shows debris sample WF-T1-016 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 65	Date: 11/18/2017	Time: 09:03
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.62026		Longitude: -90.24379
Description: This photograph shows debris sample WF-T1-017 collected from residential neighborhood near Park Warehouse.		



Photo No.: 66	Date: 11/18/2017	Time: 09:03
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.62026	Longitude: -90.24379	
Description: This photograph shows debris sample WF-T1-017 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 67	Date: 11/18/2017	Time: 09:05
Photographer: Greg Blattner		Direction: East
Latitude: 38.62020		Longitude: -90.24215
Description: This photograph shows debris sample WF-T1-018 collected from residential neighborhood near Park Warehouse.		



Photo No.: 68	Date: 11/18/2017	Time: 09:05
Photographer: Greg Blattner		Direction: East
Latitude: 38.62020	Longitude: -90.24311	
Description: This photograph shows debris sample WF-T1-018 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 69	Date: 11/18/2017	Time: 09:08
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.62015		Longitude: -90.24252
Description: This photograph shows debris sample WF-T1-019 collected from residential neighborhood near Park Warehouse.		

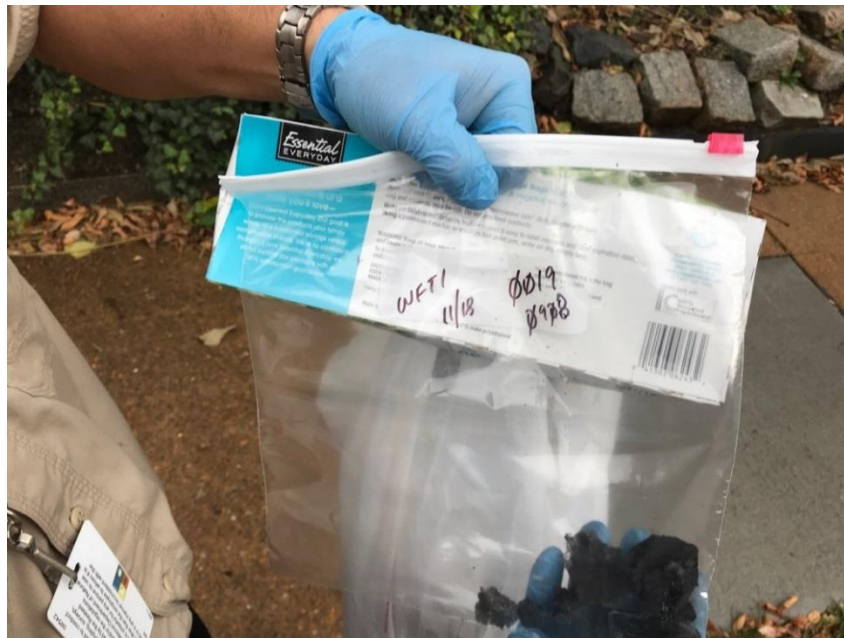


Photo No.: 70	Date: 11/18/2017	Time: 09:08
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.62015		Longitude: -90.24252
Description: This photograph shows debris sample WF-T1-019 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 71	Date: 11/18/2017	Time: 09:10
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.62013		Longitude: -90.24215
Description: This photograph shows debris sample WF-T1-020 collected from residential neighborhood near Park Warehouse.		



Photo No.: 72	Date: 11/18/2017	Time: 09:10
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.62013		Longitude: -90.24215
Description: This photograph shows debris sample WF-T1-020 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 73	Date: 11/18/2017	Time: 09:20
Photographer: Greg Blattner		Direction: West
Latitude: 38.61976		Longitude: -90.24222
Description: This photograph shows debris sample WF-T1-021 collected from residential neighborhood near Park Warehouse.		



Photo No.: 74	Date: 11/18/2017	Time: 09:20
Photographer: Greg Blattner		Direction: West
Latitude: 38.61976		Longitude: -90.24222
Description: This photograph shows debris sample WF-T1-021 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 75	Date: 11/18/2017	Time: 09:25
Photographer: Greg Blattner		Direction: West
Latitude: 38.61979		Longitude: -90.24252
Description: This photograph shows debris sample WF-T1-022 collected from residential neighborhood near Park Warehouse.		



Photo No.: 76	Date: 11/18/2017	Time: 09:25
Photographer: Greg Blattner		Direction: West
Latitude: 38.61979	Longitude: -90.24237	
Description: This photograph shows debris sample WF-T1-022 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 77	Date: 11/18/2017	Time: 09:30
Photographer: Greg Blattner		Direction: North
Latitude: 38.61990		Longitude: -90.24335
Description: This photograph shows debris sample WF-T1-023 collected from residential neighborhood near Park Warehouse.		

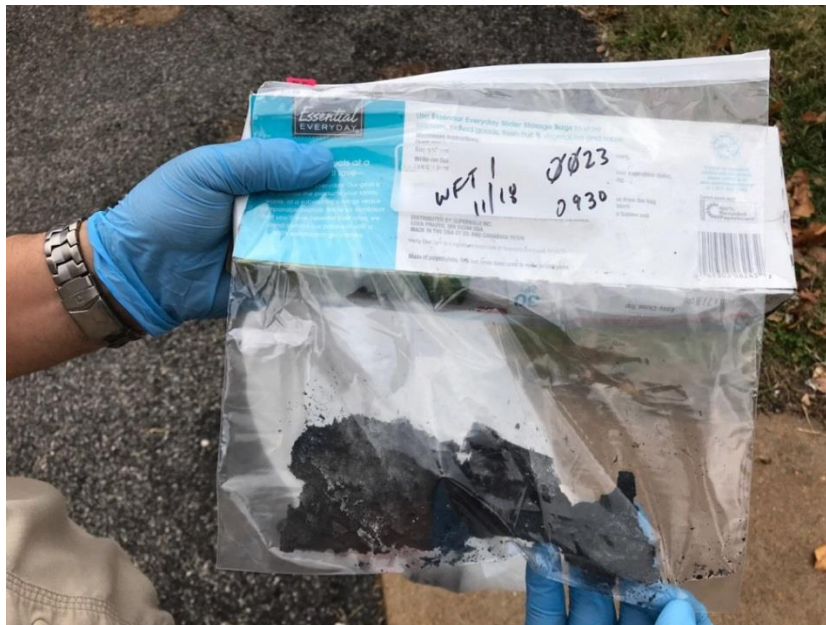


Photo No.: 78	Date: 11/18/2017	Time: 09:30
Photographer: Greg Blattner		Direction: North
Latitude: 38.61990	Longitude: -90.24335	
Description: This photograph shows debris sample WF-T1-023 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 79	Date: 11/18/2017	Time: 09:35
Photographer: Greg Blattner		Direction: North
Latitude: 38.61990		Longitude: -90.24369
Description: This photograph shows debris sample WF-T1-024 collected from residential neighborhood near Park Warehouse.		



Photo No.: 80	Date: 11/18/2017	Time: 09:35
Photographer: Greg Blattner		Direction: North
Latitude: 38.61990		Longitude: -90.24369
Description: This photograph shows debris sample WF-T1-024 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 81	Date: 11/18/2017	Time: 09:38
Photographer: Greg Blattner		Direction: North
Latitude: 38.62009		Longitude: -90.24432
Description: This photograph shows debris sample WF-T1-025 collected from residential neighborhood near Park Warehouse.		



Photo No.: 82	Date: 11/18/2017	Time: 09:38
Photographer: Greg Blattner		Direction: North
Latitude: 38.62009		Longitude: -90.24432
Description: This photograph shows debris sample WF-T1-025 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 83	Date: 11/18/2017	Time: 10:20
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61913	Longitude: -90.24159	
Description: This photograph shows debris sample WF-T1-026 collected from residential neighborhood near Park Warehouse.		



Photo No.: 84	Date: 11/18/2017	Time: 10:20
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61913		Longitude: -90.24159
Description: This photograph shows debris sample WF-T1-026 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 85	Date: 11/18/2017	Time: 10:28
Photographer: Greg Blattner		Direction: South
Latitude: 38.61907		Longitude: -90.24065
Description: This photograph shows debris sample WF-T1-027 collected from residential neighborhood near Park Warehouse.		



Photo No.: 86	Date: 11/18/2017	Time: 10:28
Photographer: Greg Blattner		Direction: South
Latitude: 38.61907	Longitude: -90.24065	
Description: This photograph shows debris sample WF-T1-027 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 87	Date: 11/18/2017	Time: 10:30
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61900		Longitude: -90.23973
Description: This photograph shows debris sample WF-T1-028 collected from residential neighborhood near Park Warehouse.		

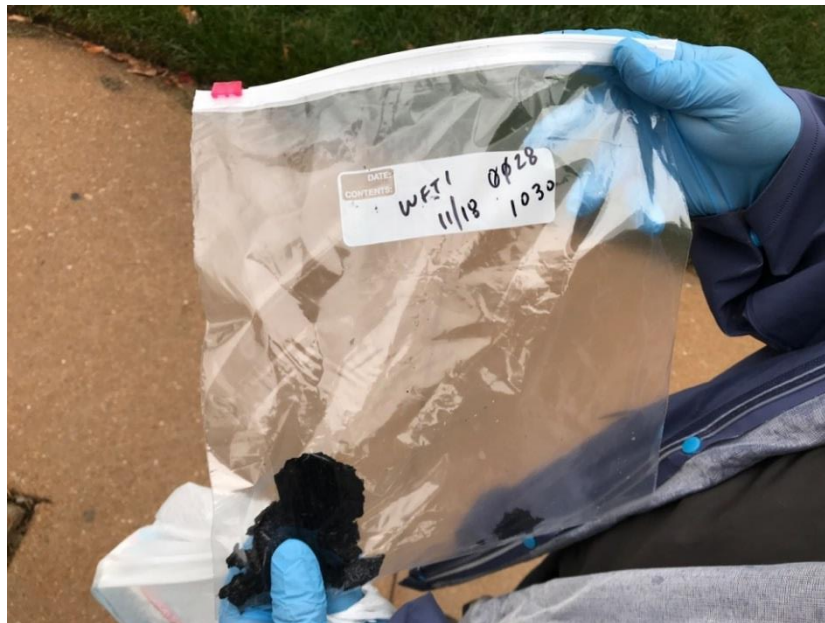


Photo No.: 88	Date: 11/18/2017	Time: 10:30
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61900	Longitude: -90.23973	
Description: This photograph shows debris sample WF-T1-028 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 89	Date: 11/18/2017	Time: 10:35
Photographer: Greg Blattner		Direction: North
Latitude: 38.61928		Longitude: -90.24142
Description: This photograph shows debris sample WF-T1-029 collected from residential neighborhood near Park Warehouse.		



Photo No.: 90	Date: 11/18/2017	Time: 10:35
Photographer: Greg Blattner		Direction: North
Latitude: 38.61928		Longitude: -90.24142
Description: This photograph shows debris sample WF-T1-029 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 91	Date: 11/18/2017	Time: 10:45
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61874		Longitude: -90.24038
Description: This photograph shows debris sample WF-T1-030 collected from residential neighborhood near Park Warehouse.		



Photo No.: 92	Date: 11/18/2017	Time: 10:45
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61874	Longitude: -90.24038	
Description: This photograph shows debris sample WF-T1-030 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 93	Date: 11/18/2017	Time: 11:00
Photographer: Greg Blattner		Direction: North
Latitude: 38.61839		Longitude: -90.24255
Description: This photograph shows debris sample WF-T1-031 collected from residential neighborhood near Park Warehouse.		



Photo No.: 94	Date: 11/18/2017	Time: 11:00
Photographer: Greg Blattner		Direction: North
Latitude: 38.61838		Longitude: -90.24155
Description: This photograph shows debris sample WF-T1-031 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 95	Date: 11/18/2017	Time: 11:10
Photographer: Greg Blattner		Direction: North
Latitude: 38.61959		Longitude: -90.24411
Description: This photograph shows debris sample WF-T1-032 collected from residential neighborhood near Park Warehouse.		



Photo No.: 96	Date: 11/18/2017	Time: 11:10
Photographer: Greg Blattner		Direction: North
Latitude: 38.61959	Longitude: -90.24411	
Description: This photograph shows debris sample WF-T1-032 collected from residential neighborhood near Park Warehouse.		

Park Warehouse Fire – St. Louis, Missouri



Photo No.: 97	Date: 11/18/2017	Time: 11:15
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61932	Longitude: -90.24346	
Description: This photograph shows debris sample WF-T1-033 collected from residential neighborhood near Park Warehouse.		



Photo No.: 98	Date: 11/18/2017	Time: 11:15
Photographer: Greg Blattner		Direction: Southeast
Latitude: 38.61932	Longitude: -90.24346	
Description: This photograph shows debris sample WF-T1-033 collected from residential neighborhood near Park Warehouse.		

APPENDIX C

ANALYTICAL DATA REPORTS AND CHAIN-OF-CUSTODY RECORDS FOR DEBRIS SAMPLES



PRECISION ANALYSIS, INC.

BULK SAMPLE ANALYSIS

Client: Tetra Tech, Inc.
Project Name: 34th & Park Ave. - Warehouse Fire
Project Number: X9025140001.039

Date Received: 11-17-15

Date Reported: 11-17-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
West Side of 39th St. North of Park Ave. - Burnt Black Piece				
326656	1	None Detected	Glass Wool	Black Tar Binders
West Side of 39th St. North of Park Ave. - Burnt Fibrous				
326657	2	None Detected	Glass Wool	Black Tar Binders, Binders, Aluminum
West Side of 39th St. North of Park Ave. - Burnt Cardboard				
326658	3	None Detected	Cellulose	Binders
West Side of 39th St. North of Park Ave. - Burnt Brittle				
326659	4	None Detected	Glass Wool	Black Tar Binders
West Side of 39th St. North of Park Ave. - Burnt Brittle				
326660	5	None Detected	Glass Wool	Black Tar Binders, Aggregate
North West Corner of 39th St. & Park - Burnt Brittle				
326661	6	None Detected		Black Tar Binders, Aggregate
South West Corner of 39th St. & Park Ave. - Burnt Brittle				
326662	7	None Detected	Cellulose	Black Tar Binders
North Side of Park West of 39th - Fibrous Cloth				
326663	8	None Detected	Glass Wool	Black Tar Binders
North Side of Park West of 39th - Brittle				
326664	9	None Detected	Cellulose, Glass Wool	Black Tar Binders

* The upper detection limit is 100 percent.
The lower detection limit is less than 1 percent.



PRECISION ANALYSIS, INC.

BULK SAMPLE ANALYSIS

Client: Tetra Tech, Inc.
Project Name: 34th & Park Ave. - Warehouse Fire
Project Number: X9025140001.039

Date Received: 11-17-15

Date Reported: 11-17-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
North Side of Park West of 39th - Fibrous Brittle				
326665	10	None Detected	Glass Wool	Black Tar Binders
North Side of Park West of 39th - Fibrous				
326666	11	None Detected	Glass Wool	Black Tar Binders
North of Park West of 39th - Fibrous				
326667	12	None Detected	Cellulose, Glass Wool	Black Tar Binders
South Side of Park West of 39th - Fibrous				
326668	13	None Detected	Glass Wool	Black Tar Binders
South Side of Park West of 39th - Fibrous				
326669	14	None Detected	Glass Wool	Black Tar Binders
South Side of Park West of 39th - Fibrous				
326670	15	None Detected	Glass Wool	Black Tar Binders
South Side of Park West of 39th - Brittle				
326671	16	None Detected	Cellulose, Glass Wool	Black Tar Binders
South Side Warehouse Rubble - Possible Roofing Material				
326672	17	15-20% Chrysotile	Glass Wool	Black Tar Binders, Binders, Paint
South Side Warehouse Rubble - Fibrous Building Material				
326673	18	10-15% Chrysotile	Cellulose, Glass Wool	Black Tar Binders, Binders, Paint
South Side Warehouse Rubble - Flexible				
326674	19	None Detected	Cellulose	Black Tar Binders

* The upper detection limit is 100 percent.
The lower detection limit is less than 1 percent.



PRECISION ANALYSIS, INC.

BULK SAMPLE ANALYSIS

Client: Tetra Tech, Inc.
Project Name: 34th & Park Ave. - Warehouse Fire
Project Number: X9025140001.039

Date Received: 11-17-15

Date Reported: 11-17-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
Behind Warehouse - Fibrous Building Material				
326675	20	None Detected	Glass Wool	Black Tar Binders
Behind Warehouse - Fibrous Cloth				
326676	21	5-10% Chrysotile	Glass Wool	Black Tar Binders

* The upper detection limit is 100 percent.
The lower detection limit is less than 1 percent.

Paul Spell
Laboratory Director

AIHA Bulk Asbestos Proficiency Analytical Testing Program ID # 101228
In Association with RTI Center for Measurements and Quality Assurance

PLM is not recommended for analysis of vinyl floor tile. Vinyl floor tile often contains milled asbestos with fiber lengths of 1 micrometer or less. Because these fibers are not detected by PLM, PLM analysis may yield a false negative result. We recommend qualitative analysis of vinyl floor tile by Transmission Electron Microscopy (TEM).

Precision Analysis assumes no responsibility for financial or health consequences for action or lack of action taken by our clients or their agents as a result of these analytical reports. Since Precision Analysis was not involved in the collection of these samples, we cannot attest to the proper collection of said samples and therefore are neither responsible nor liable for the accuracy, validity or completeness of the sample collection.

CHAIN OF CUSTODY

Please send results to:
gblattner@seagullenvirotech.com
Smith.Heath@epa.gov

Page 1 of 2 page(s)

DATE: 11-17-2017

TAT: Immediate Same Day ☒ 24 Hr 48 Hr 72 Hr 96 Hr 5 Day

CLIENT: Tetra Tech JOB NAME: 39th + Park Ave Warehouse Fire JOB NUMBER: X9025140001.039

Sample ID	Analysis	Material Location	Approximate Quantity	Material Description	Condition
WF-001	PLM	38.62167 West side of 39th St, N of -90.24444 Park Ave		Burnt black plastic piece	Burnt, brittle
WF-002	PLM	38.62172 W side of 39th St, N of -90.24443 Park Ave		Burnt Fibrous	Burnt
WF-003	PLM	38.62164 W side of 39th St, N of -90.24440 Park Ave		Burnt cardboard	Burnt
WF-004	PLM	38.62175 W side of 39th St, N of -90.24440 Park Ave		Burnt, brittle	Burnt
WF-005	PLM	38.62175 W side of 39th St, N of -90.24440 Park Ave		Burnt, brittle	Burnt
WF-006	PLM	38.62143 NW corner of 39th + Park -90.24461		Burnt, brittle	Burnt
WF-007	PLM	38.62129 SW corner of 39th + Park -90.24457		Burnt, brittle	Burnt
WF-008	PLM	38.62143 N side of Park, W of 39th -90.24480		Fibrous, cloth	Burnt
WF-009	PLM	38.62146 N side of Park, W of 39th -90.24488		Brittle	Burnt
WF-010	PLM	38.62146 N side of Park, W of 39th -90.24498		Fibrous, brittle	Burnt
WF-011	PLM	38.62148 N side of Park, W of 39th -90.24499		Fibrous	Burnt
WF-012	PLM	38.62150 N of Park, W of 39th -90.24515		Fibrous	Burnt
WF-013	PLM	38.62147 S side of Park, W of 39th -90.24516 South		Fibrous	Burnt
WF-014	PLM	38.62132 S side of Park, W of 39th -90.24511		Fibrous	Burnt
WF-015	PLM	38.62132 S of Park, W of 39th -90.24526		Fibrous	Burnt

 Check for Stop on First Positive

S.F. - Square Feet

L.F. - Linear Feet

Relinquished By: [Signature]

Date: 11-17-17

Received By: [Signature]

Date: NOV 17 2017

BY:

RECEIVED

CHAIN OF CUSTODY

Page 2 of 2 page(s)

DATE: 11-17-2017

TAT: Immediate ____

Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ 96 Hr ☐ 5 Day ☐

CLIENT: Tetra Tech

JOB NAME: _____

JOB NUMBER: _____

[illegible]

 Check for Stop on First Positive

S.F. - Square Feet

L.F. - Linear Feet

Relinquished By:

Date: 1-17-17

Received By:

RECEIVED

Date: NOV 17 2017

BY: _____



PRECISION ANALYSIS, INC.

BULK SAMPLE ANALYSIS

Client: TetraTech
 Project Name: 34th & Park Ave. - Warehouse Fire
 Project Number: X9025140001.039

Date Received: 11-18-15

Date Reported: 11-19-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
		Park Ave. - Flowerbed - Fibrous, Brittle		
326677	WF-T1-001	None Detected	Cellulose, Glass Wool	Black Tar Binders, Binders
		Park Ave. - Landscape - Fibrous		
326678	WF-T1-002	None Detected	Cellulose, Glass Wool	Black Tar Binders
		Park Ave. - Yard - Fibrous		
326679	WF-T1-003	None Detected	Cellulose, Glass Wool	Black Tar Binders
		Park Ave. - Flowerbed - Fibrous		
326680	WF-T1-004	None Detected	Cellulose, Glass Wool	Black Tar Binders
		Park Ave. - Yard & Landscaping - Brittle		
326681	WF-T1-005	None Detected	Cellulose, Glass Wool	Black Tar Binders
		Alley (Park & Folsom) Parking Lot - Tarry		
326682	WF-T1-006	None Detected	Cellulose	Black Tar Binders
		Alley (Park & Folsom) Alley - Brittle		
326683	WF-T1-007	None Detected	Cellulose, Glass Wool	Black Tar Binders
		Alley Between Park & Folsom - Fibrous & Brittle		
326684	WF-T1-008	None Detected	Cellulose, Glass Wool	Black Tar Binders

* The upper detection limit is 100 percent.
 The lower detection limit is less than 1 percent.



**PRECISION
ANALYSIS, INC.**
BULK SAMPLE ANALYSIS

Client: TetraTech
Project Name: 34th & Park Ave. - Warehouse Fire
Project Number: X9025140001.039

Date Received: 11-18-15

Date Reported: 11-19-15

**Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method**

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
Alley Between Park & Folsom - Yard Area - Brittle				
326685	WF-T1-009	None Detected	Cellulose, Glass Wool	Black Tar Binders
Alley Between Park & Folsom - Yard Area - Fibrous				
326686	WF-T1-010	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave. - Yard/Side Walk - Brittle				
326687	WF-T1-011	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave. - Yard/Side Walk - Fibrous				
326688	WF-T1-012	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave. - Yard/Side Walk - Fibrous, Brittle				
326689	WF-T1-013	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave. - Yard - Fibrous				
326690	WF-T1-014	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave. - Yard - Brittle				
326691	WF-T1-015	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave, Side Walk - Fibrous, Brittle				
326692	WF-T1-016	None Detected	Glass Wool	Black Tar Binders

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PRECISION ANALYSIS, INC.

BULK SAMPLE ANALYSIS

Client: TetraTech
 Project Name: 34th & Park Ave. - Warehouse Fire
 Project Number: X9025140001.039

Date Received: 11-18-15

Date Reported: 11-19-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
Folsom Ave, Sidewalk/Yard - Fibrous, Brittle				
326693	WF-T1-017	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave, Sidewalk/Yard - Brittle				
326694	WF-T1-018	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave, Sidewalk/Yard - Brittle, Fibrous				
326695	WF-T1-019	None Detected	Cellulose, Glass Wool	Black Tar Binders
Folsom Ave, Sidewalk/Yard - Fibrous, Brittle				
326696	WF-T1-020	None Detected	Cellulose, Glass Wool	Black Tar Binders
Alley Behind Folsom Ave. - Fiber Glass Like Material				
326697	WF-T1-021	None Detected	Glass Wool	Black Tar Binders
Alley Behind Folsom Ave. - Brittle				
326698	WF-T1-022	None Detected	Cellulose, Glass Wool	Black Tar Binders
Alley Behind Folsom - Parking Area - Fibrous				
326699	WF-T1-023	None Detected	Cellulose, Glass Wool	Black Tar Binders
Alley Behind Folsom - Parking Area - Brittle				
326700	WF-T1-024	None Detected	Cellulose, Glass Wool	Black Tar Binders
Alley Behind Folsom - Grassy Area - Fibrous, Brittle				
326701	WF-T1-025	None Detected	Glass Wool	Black Tar Binders

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**PRECISION
ANALYSIS, INC.**
BULK SAMPLE ANALYSIS

Client: TetraTech
 Project Name: 34th & Park Ave. - Warehouse Fire
 Project Number: X9025140001.039

Date Received: 11-18-15

Date Reported: 11-19-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
Blaine Ave. - Brittle				
326702	WF-T1-026	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Fibrous				
326703	WF-T1-027	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Brittle				
326704	WF-T1-028	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Brittle				
326705	WF-T1-029	None Detected	Glass Wool	Black Tar Binders
Alley Way Between Blaine & McRee Ave. - Fibrous, Brittle				
326706	WF-T1-030	None Detected	Glass Wool	Black Tar Binders
McRee Ave. - Brittle				
326707	WF-T1-031	None Detected	Cellulose	Black Tar Binders
McRee Ave. - Fibrous				
326708	WF-T1-032	None Detected	Glass Wool	Black Tar Binders
McRee Ave. - Fibrous				
326709	WF-T1-033	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Fibrous				
326710	WF-T2-001	None Detected	Cellulose, Glass Wool	Black Tar Binders
Blaine Ave. - Brittle				
326711	WF-T2-002	None Detected	Cellulose, Glass Wool	Black Tar Binders, Aggregate

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PRECISION ANALYSIS, INC.

BULK SAMPLE ANALYSIS

Client: TetraTech
 Project Name: 34th & Park Ave. - Warehouse Fire
 Project Number: X9025140001.039

Date Received: 11-18-15

Date Reported: 11-19-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
39th St. - Brittle				
326712	WF-T2-003	None Detected	Cellulose	Black Tar Binders
Alley Between Blaine & Folsom - Fibrous, Cloth Like				
326713	WF-T2-004	None Detected	Glass Wool	Black Tar Binders
Folsom Ave. - Brittle				
326714	WF-T2-005	None Detected	Cellulose	Black Tar Binders
Folsom Ave. - Brittle				
326715	WF-T2-006	None Detected	Cellulose	Black Tar Binders
39th St. - Fibrous				
326716	WF-T2-007	None Detected	Cellulose, Glass Wool	Black Tar Binders
39th St. - Brittle				
326717	WF-T2-008	None Detected	Cellulose	Binders
39th St. - Fibrous				
326718	WF-T2-009	None Detected	Cellulose, Glass Wool	Black Tar Binders
Alley Between Folsom & Park - Fibrous				
326719	WF-T2-010	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Brittle				
326720	WF-T2-011	None Detected	Cellulose, Glass Wool	Black Tar Binders
Blaine Ave. - Fibrous				
326721	WF-T2-012	None Detected	Glass Wool	Black Tar Binders

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**PRECISION
ANALYSIS, INC.**
BULK SAMPLE ANALYSIS

Client: TetraTech
Project Name: 34th & Park Ave. - Warehouse Fire
Project Number: X9025140001.039

Date Received: 11-18-15

Date Reported: 11-19-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
Blaine Ave. - Fibrous, Cloth Like				
326722	WF-T2-013	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Fibrous				
326723	WF-T2-014	None Detected	Glass Wool	Black Tar Binders
Blaine Ave. - Brittle				
326724	WF-T2-015	None Detected	Cellulose	Black Tar Binders
Side Street, Parallel to Grand - Brittle				
326725	WF-T2-016	None Detected	Cellulose	Black Tar Binders
Alley Between Blaine & Park - Brittle				
326726	WF-T2-017	None Detected	Cellulose	Black Tar Binders
Alley Adjacent to McRee - Fibrous				
326727	WF-T2-018	None Detected	Glass Wool	Black Tar Binders
Alley Between McRee & Blaine - Brittle				
326728	WF-T2-019	None Detected	Cellulose	Black Tar Binders
Blaine Park - Brittle				
326729	WF-T2-020	None Detected	Cellulose	Black Tar Binders
Blaine Park - Brittle				
326730	WF-T2-021	None Detected	Cellulose	Black Tar Binders
Blaine Park - Fibrous				
326731	WF-T2-022	None Detected	Glass Wool	Black Tar Binders
Blaine Park - Fibrous				
326732	WF-T2-023	None Detected	Glass Wool	Black Tar Binders

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**PRECISION
ANALYSIS, INC.**
BULK SAMPLE ANALYSIS

Client: TetraTech
Project Name: 34th & Park Ave. - Warehouse Fire
Project Number: X9025140001.039


Date Received: 11-18-15

Date Reported: 11-19-15

Technique: Polarized Light Microscopy with Dispersion Staining
In accordance with EPA/600/R-93/116 Test Method

Lab No.	Sample No.	Asbestos Detected & Percentage *	Fibrous Material	Non-Fibrous Material
Blaine Park - Fibrous				
326733	WF-T2-024	None Detected	Glass Wool	Black Tar Binders
Blaine Park - Fibrous				
326734	WF-T2-025	None Detected	Glass Wool	Black Tar Binders
Blaine Park - Fibrous				
326735	WF-T2-026	None Detected	Glass Wool	Black Tar Binders

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Paul Spell
Laboratory Director

AIHA Bulk Asbestos Proficiency Analytical Testing Program ID # 101228
In Association with RTI Center for Measurements and Quality Assurance

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CHAIN OF CUSTODY

Page 1 of 4 page(s)

DATE: 11-18-17

TAT: Immediate ☒

Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ 96 Hr ☐ 5 Day ☐

CLIENT: EPA

JOB NAME: 394 Park Warehouse Fire

JOB NUMBER: X9025140001.039

Sample ID	Analysis	Material Location	Approximate Quantity	Material Description	Condition
WF-TI-001	PLM	38.62121 -90.24416 Park Avenue - Flowerbed		Fibrous, brittle	Burnt
WF-TI-002	PLM	38.62121 -90.24391 Park Avenue - Landscape		Fibrous	Burnt
WF-TI-003	PLM	38.62118 -90.24360 Park Avenue - Yard		Fibrous	Burnt
WF-TI-004	PLM	38.62115 -90.24324 Park Avenue - Flowerbed		Fibrous	Burnt
WF-TI-005	PLM	38.62091 -90.24187 Park Avenue - yard + landscaping		Brittle	Burnt
WF-TI-006	PLM	38.62065 -90.24192 Alley (Park + Folsom) parking lot		Tarry	Burnt
WF-TI-007	PLM	38.62060 -90.24233 Alley (Park + Folsom) alley		Brittle	Burnt
WF-TI-008	PLM	38.62073 -90.24297 Alley between Park + Folsom		Fibrous + Brittle	Burnt
WF-TI-009	PLM	38.62081 -90.24338 Alley between Park + Folsom - yard area		Brittle	Burnt
WF-TI-010	PLM	38.62090 -90.24376 Alley between Park + Folsom - yard area		Fibrous	Burnt
WF-TI-011	PLM	38.62026 -90.24213 Folsom Ave - yard/sidewalk		Brittle	Burnt
WF-TI-012	PLM	38.62028 -90.24234 Folsom Ave - yard/sidewalk		Fibrous	Burnt
WF-TI-013	PLM	38.62032 -90.24269 Folsom Ave - yard/sidewalk		Fibrous, brittle	Burnt
WF-TI-014	PLM	38.62040 -90.24338 Folsom Ave - yard		Fibrous	Burnt
WF-TI-015	PLM	38.62044 -90.24387 Folsom Ave - yard		Brittle	Burnt

☐ Check for Stop on First Positive

S.F. - Square Feet

L.F. - Linear Feet

Relinquished By: [Signature] Date: 11-18-17
(Greg Stettner)

Received By: [Signature]

RECEIVED

Date: NOV 18 2017

BY: _____

CHAIN OF CUSTODY

Page 2 of 4 page(s)

DATE: 11-18-17

TAT: Immediate X

Same Day 24 Hr 48 Hr 72 Hr 96 Hr 5 Day

CLIENT: EPA

JOB NAME: 39th + Park Lane House Fire

JOB NUMBER: X9005140001.039

Sample ID	Analysis	Material Location	Approximate Quantity	Material Description	Condition
WF-TI-0016	PLM	38.62020 -90.24424 Folsom Ave, sidewalk		Fibrous, brittle	Burnt
WF-TI-0017	PLM	38.62026 -90.24379 Folsom Ave, sidewalk/yard		Fibrous, brittle	Burnt
WF-TI-0018	PLM	38.62020 -90.24311 Folsom Ave, sidewalk/yard		Brittle	Burnt
WF-TI-0019	PLM	38.62015 -90.24352 Folsom Ave, sidewalk/yard		Brittle, fibrous	Burnt
WF-TI-0020	PLM	38.62013 -90.24215 Folsom Ave, sidewalk/yard		Fibrous, brittle	Burnt
WF-TI-0021	PLM	38.61976 -90.24222 Ally behind Folsom Ave		Fiber glass like material	Burnt
WF-TI-0022	PLM	38.61979 -90.24237 Ally behind Folsom Ave		Brittle	Burnt
WF-TI-0023	PLM	38.61990 -90.24335 Ally behind Folsom - parking area		Fibrous	Burnt
WF-TI-0024	PLM	38.61990 -90.24369 Ally behind Folsom - parking area		Brittle	Burnt
WF-TI-0025	PLM	38.62009 -90.24432 Ally behind Folsom - grassy area		Fibrous, brittle	Burnt
WF-TI-0026	PLM	38.61913 -90.24159 Blaine Avenue		Brittle	Burnt
WF-TI-0027	PLM	38.61907 -90.24065 Blaine Avenue		Fibrous	Burnt
WF-TI-0028	PLM	38.61900 -90.23973 Blaine Avenue		Brittle	Burnt
WF-TI-0029	PLM	38.61928 -90.24142 Blaine Avenue		Brittle	Burnt
WF-TI-0030	PLM	38.61874 -90.24038 Alley way between Blaine + Mc Rex Ave		Fibrous, brittle	Burnt

 Check for Stop on First Positive

S.F. - Square Feet

L.F. - Linear Feet

Relinquished By: [Signature]

Date: 11-18-17

Received By: [Signature]

RECEIVED

NOV 18 2017

Date:

BY:

CHAIN OF CUSTODY

Page 3 of 4 page(s)

DATE: EPA

TAT: Immediate X

Same Day 24 Hr 48 Hr 72 Hr 96 Hr 5 Day

CLIENT: EPA

JOB NAME: 39th + Park Warehouse Fire

JOB NUMBER: X4025140001.039

Sample ID	Analysis	Material Location	Approximate Quantity	Material Description	Condition
WF-T1-0031	PLM	38.61839 -90.24155 McBee Avenue		Brittle	Burnt
WF-T1-0032	PLM	38.61959 -90.24411 Blaine Avenue		Fibrous	
WF-T1-0033	PLM	38.61932 -90.24340 Blaine Avenue		Fibrous	
WF-T2-001	PLM	38.61956 -90.24497 Blaine Ave		Fibrous	
WF-T2-002	PLM	38.61947 -90.24522 Blaine Ave		Brittle	
WF-T2-003	PLM	38.61971 -90.24472 39th St		Brittle	
WF-T2-004	PLM	38.62001 -90.24479 Alley b/t Blaine + Folsom		Fibrous, cloth like	
WF-T2-005	PLM	38.62037 -90.24546 Folsom Ave		Brittle	
WF-T2-006	PLM	38.62044 -90.24494 Folsom Ave		Brittle	
WF-T2-007	PLM	38.62045 -90.24439 39th St		Fibrous	
WF-T2-008	PLM	38.62061 -90.24438 39th St		Brittle	
WF-T2-009	PLM	38.62068 -90.24438 39th St		Fibrous	
WF-T2-010	PLM	38.62093 -90.24558 Alley b/t Folsom + Park		Fibrous	
WF-T2-011	PLM	38.61918 -90.24191 Blaine Ave		Brittle	
WF-T2-012	PLM	38.61934 -90.24171 Blaine Ave		Fibrous	

 Check for Stop on First Positive

S.F. - Square Feet

L.F. - Linear Feet

Relinquished By: [Signature]

Date: 11-18-17

Received By: [Signature]

RECEIVED

Date: NOV 18 2017

BY:

CHAIN OF CUSTODY

Page 4 of 4 page(s)

DATE: 11-18-17

TAT: Immediate X

Same Day 24 Hr 48 Hr 72 Hr 96 Hr 5 Day

CLIENT: EPA

JOB NAME: 39th + Park Worehouse Fire

JOB NUMBER: X9025140001.039

Sample ID	Analysis	Material Location	Approximate Quantity	Material Description	Condition
WF-T2-013	PLM	38.61916 -90.24103 Blaine Ave		Fibrous, cloth like	Burnt
WF-T2-014	PLM	38.61927 -90.24096 Blaine Ave		Fibrous	
WF-T2-015	PLM	38.61899 -90.23988 Blaine Ave		Brittle	
WF-T2-016	PLM	38.61932 -90.23970 Side street, parallel to Grand		Brittle	
WF-T2-017	PLM	38.61966 -90.24104 Alley b/t Blaine + Park		Brittle	
WF-T2-018	PLM	38.61786 -90.24183 Alley adjacent to McRee		Fibrous	
WF-T2-019	PLM	38.61906 -90.24502 Alley b/t McRee + Blaine		Brittle	
WF-T2-020	PLM	38.61939 -90.24208 Blaine Park		Brittle	
WF-T2-021	PLM	38.61959 -90.24210 Blaine Park		Brittle	
WF-T2-022	PLM	38.61967 -90.24210 Blaine Park		Brittle Fibrous	
WF-T2-023	PLM	38.61937 -90.24232 Blaine Park		Fibrous	
WF-T2-024	PLM	38.61897 -90.24258 Blaine Park		Fibrous	
WF-T2-025	PLM	38.61867 -90.24228 Blaine Park		Fibrous	
WF-T2-026	PLM	38.61886 -90.24220 Blaine Park		Fibrous	
	PLM				

 Check for Stop on First Positive

S.F. - Square Feet

L.F. - Linear Feet

Relinquished By: [Signature]

Date: 11-18-17

Received By: [Signature]

RECEIVED

Date: NOV 18 2017

BY:

APPENDIX D

REMOVAL SITE EVALUATION FORM

SUPERFUND REMOVAL SITE EVALUATION **and** **REMOVAL PRELIMINARY ASSESSMENT**

I. SITE NAME AND LOCATION:

NAME: Park Warehouse Fire

ADDRESS OR OTHER LOCATION IDENTIFIER: 3937 Park Avenue

CITY: St. Louis

STATE: MO

ZIP: 63110

DIRECTIONS TO SITE: From I-64/US-40 in St. Louis, take Exit 36C and go 0.4 mile southwest on Vandeventer Avenue, 0.3 mile east on Chouteau Avenue, 0.4 mile south on S. 39th Street, and 0.1 mile west on Park Avenue.

MAP ATTACHED: see Figure 1 with Trip Report

II. PROGRAM CONTACTS:

REQUESTED BY: Heath Smith

DATE OF REQUEST: 12/01/17

AGENCY/OFFICE: U.S. EPA Region 7 Superfund Division

MAILING ADDRESS: 11201 Renner Boulevard

CITY: Lenexa

STATE: KS

ZIP: 66219

TELEPHONE: (636) 326-4724

FAX:

EVALUATOR: Greg Blattner

AGENCY/OFFICE: Seagull Environmental Technologies, Inc. / Tetra Tech, Inc.

MAILING ADDRESS: 415 Oak Street

CITY: Kansas City

STATE: MO

ZIP: 64106

TELEPHONE: (816) 412-1741

FAX: (816) 410-1748

III. REMOVAL SITE EVALUATION CRITERIA [40 CFR 300.410(e)]:

IS THERE A RELEASE AS DEFINED BY THE NCP:

YES ☒ **or NO** ☐

EXPLAIN: Sampling activities at the site have identified debris containing asbestos near a burned down warehouse.

*(A **RELEASE** is defined as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant), but excludes: workplace exposures; engine exhaust emissions; nuclear releases otherwise regulated; and the normal application of fertilizer. For purposes of the NCP, release also means threat of release.)*

IS THE SOURCE A FACILITY OR VESSEL AS DEFINED BY THE NCP:

YES ☒ **or NO** ☐

EXPLAIN: The source is considered a facility as defined by the NCP.

*(A **FACILITY** is defined as any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or POTW), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel. A **VESSEL** is defined as any description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel.)*

SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

DOES THE RELEASE INVOLVE A HAZARDOUS SUBSTANCE, OR POLLUTANT OR CONTAMINANT AS DEFINED BY THE NCP: YES ☒ or NO ☐

EXPLAIN: Asbestos, a hazardous substance, has been identified in debris near the site.

*(A **HAZARDOUS SUBSTANCE** means any substance, element, compound, mixture, solution, hazardous waste, toxic pollutant, hazardous air pollutant, or imminently hazardous chemical substance or mixture designated pursuant to the CWA, CERCLA, SDWA, CAA or TSCA. The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas. The definition of **POLLUTANT or CONTAMINANT** includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions or physical deformations, in such organisms or their offspring. The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas).*

IS THE RELEASE SUBJECT TO THE LIMITATIONS ON RESPONSE: YES ☐ or NO ☒

EXPLAIN: Asbestos was found in roofing material that had fallen from the warehouse as a result of the fire.

*(The **LIMITATIONS ON RESPONSE** provisions of the NCP (40 CFR 300.400(B)) states that removals shall not be undertaken in response to a release: of a naturally occurring substance in its unaltered or natural form; from products that are a part of the structure of, and result in exposure within, residential buildings or business or community structures; or into public or private drinking water supplies due to deterioration of the system through ordinary use.)*

DOES THE QUANTITY OR CONCENTRATION WARRANT RESPONSE: YES ☐ or NO ☒

EXPLAIN: Based on analytical results of fire-related debris deposited along nearby streets and in downwind residential neighborhoods, indicating minimal presence of asbestos and absence of asbestos-containing material farther than approximately 20 feet from the warehouse, no removal action appears warranted.

HAS A PRP BEEN IDENTIFIED: YES ☒ or NO ☐

EXPLAIN: Park Warehouse Services of St. Louis, Missouri, owns the warehouse that burned down, releasing asbestos-containing material.

IV. CONDITIONS TO WARRANT REMOVAL [40 CFR 300.415(b)(2)]:

ACTUAL OR POTENTIAL EXPOSURE TO HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS: YES ☒ or NO ☐

EXPLAIN: Presence of released asbestos-containing material presents a threat to human health and the environment.

ACTUAL OR POTENTIAL CONTAMINATION OF DRINKING WATER SUPPLIES: YES ☐ or NO ☒

EXPLAIN: Drinking water in the area is provided through a public water supply system.

HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN DRUMS, BARRELS, OR BULK STORAGE CONTAINERS: YES ☐ or NO ☒

EXPLAIN: No containers were identified at the site.

HIGH LEVELS OF HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN NEAR-SURFACE SOILS: YES ☐ or NO ☒

EXPLAIN: Three debris samples containing 5-20% chrysotile asbestos were collected near the burned warehouse building. The remaining 77 debris samples were non-detect for asbestos.

CONDITIONS SUSCEPTIBLE TO IMPACT FROM ADVERSE WEATHER CONDITIONS: YES ☐ or NO ☒

EXPLAIN: Adverse weather conditions would not likely impact conditions at the site.

SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

THREAT OF FIRE OR EXPLOSION: YES ☐ or NO ☒

EXPLAIN: The building burned down during the fire and the area was thoroughly soaked with water by the fire department. No further fire or explosion threat is suspected.

POTENTIAL FOR OTHER FEDERAL OR STATE RESPONSE MECHANISMS: YES ☒ or NO ☐

EXPLAIN: The St. Louis Health Department and the Missouri Department of Natural Resources are currently involved in evaluation of the site, along with EPA.

OTHER SITUATIONS OR FACTORS WHICH POSE A THREAT: YES ☐ or NO ☒

EXPLAIN: No other situations or factors exist that could pose a threat.

V. POTENTIAL REMOVAL ACTIONS [40 CFR 300.415(d)]:

(NOTE: The following identifies potential removal actions which may be determined to be appropriate pending further review and study. The proposed actions should be considered preliminary proposals and are subject to change.)

SITE SECURITY: YES ☐ or NO ☒

EXPLAIN: The site is located in a semi-commercial area near residential apartments along public roads. St. Louis police and fire departments set up roadblocks during the fire, but no follow-up site security is required to address presence of any hazardous materials.

DRAINAGE CONTROL: YES ☐ or NO ☒

EXPLAIN: Drainage near the site is controlled by the Metropolitan St. Louis Sewer District; no additional drainage controls are necessary.

STABILIZATION OR REMOVAL OF SURFACE IMPOUNDMENTS: YES ☐ or NO ☒

EXPLAIN: Surface impoundments do not exist at the site.

CAPPING OF CONTAMINATED SOIL: YES ☐ or NO ☒

EXPLAIN: Capping of contaminated soil would not be a likely removal action at this site.

USE OF CHEMICALS TO CONTROL/RETARD SPREAD OF CONTAMINATION: YES ☐ or NO ☒

EXPLAIN: No chemicals would likely be used to control or retard spread of contamination from site soils as a removal action.

CONTAMINATED SOIL EXCAVATION: YES ☐ or NO ☒

EXPLAIN: Excavation of contaminated soil does not appear warranted at this site.

REMOVAL OF DRUMS, TANKS, OR BULK STORAGE CONTAINERS: YES ☐ or NO ☒

EXPLAIN: Abandoned drums and other containers of materials meeting hazardous waste criteria have not been identified at the site.

CONTAINMENT, TREATMENT, OR DISPOSAL OF HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS: YES ☐ or NO ☒

EXPLAIN: No containment, treatment, or disposal of hazardous materials is required.

PROVIDE ALTERNATIVE WATER SUPPLIES: YES ☐ or NO ☒

EXPLAIN: Provision of alternate drinking water supplies is not needed at this site.

SUPERFUND REMOVAL SITE EVALUATION **and** **REMOVAL PRELIMINARY ASSESSMENT**

VI. REMOVAL SITE EVALUATION DETERMINATION AND REMOVAL PRELIMINARY ASSESSMENT FINDINGS AND RECOMMENDATIONS:

☒ **REMOVAL NOT WARRANTED—REMOVAL SITE EVALUATION TERMINATED**

(Cite one or more of the criteria from SECTION III. REMOVAL SITE EVALUATION CRITERIA, as the basis for the above determination.)

<input type="checkbox"/>	NOT A RELEASE	<input type="checkbox"/>	NOT A FACILITY OR VESSEL
<input type="checkbox"/>	NOT A HAZARDOUS SUBSTANCE OR POLLUTANT OR CONTAMINANT	<input type="checkbox"/>	SUBJECT TO RESPONSE LIMITATIONS
<input checked="" type="checkbox"/>	INSUFFICIENT QUANTITY OR CONCENTRATION	<input checked="" type="checkbox"/>	WILLING/CAPABLE PRP IDENTIFIED

COMMENT: Only three samples of asbestos-containing roofing material were discovered close to the building, while the remaining 77 samples of debris collected from nearby residential neighborhoods were found to be non-detect for asbestos.

☐ **REMOVAL RECOMMENDED [☐ EMERGENCY ☐ TIME-CRITICAL ☐ NON-TIME-CRITICAL]**

(Cite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommending that a removal action be conducted.)

<input type="checkbox"/>	EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS	<input type="checkbox"/>	ADVERSE WEATHER IMPACTS
<input type="checkbox"/>	CONTAMINATED DRINKING WATER	<input type="checkbox"/>	FIRE/EXPLOSION THREAT
<input type="checkbox"/>	DRUMS, BARRELS OR CONTAINERS	<input type="checkbox"/>	NO OTHER RESPONSE MECHANISM
<input type="checkbox"/>		<input type="checkbox"/>	CONTAMINATED SOIL
<input type="checkbox"/>		<input type="checkbox"/>	OTHER FACTORS

(Identify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the types of response actions which are recommended.)

<input type="checkbox"/>	SITE SECURITY	<input type="checkbox"/>	DRAINAGE CONTROL	<input type="checkbox"/>	IMPOUNDMENT STABILIZATION
<input type="checkbox"/>	REMOVAL OF DRUMS, BARRELS, ETC.	<input type="checkbox"/>	SOIL CAPPING	<input type="checkbox"/>	SOIL EXCAVATION
<input type="checkbox"/>	CONTAIN/TREAT/DISPOSE OF WASTES	<input type="checkbox"/>	CHEMICAL CONTROLS	<input type="checkbox"/>	ALT. DRINKING WATER SUPPLIES

COMMENT:

☐ **ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED**

(Cite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommending that additional site evaluation be performed.)

<input type="checkbox"/>	EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS	<input type="checkbox"/>	ADVERSE WEATHER IMPACTS
<input type="checkbox"/>	CONTAMINATED DRINKING WATER	<input type="checkbox"/>	FIRE/EXPLOSION THREAT
<input type="checkbox"/>	DRUMS, BARRELS OR CONTAINERS	<input type="checkbox"/>	NO OTHER RESPONSE MECHANISM
<input type="checkbox"/>		<input type="checkbox"/>	CONTAMINATED SOIL
<input type="checkbox"/>		<input type="checkbox"/>	OTHER FACTORS

(Identify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the types of response actions which may be appropriate pending the results of further site evaluation.)

<input type="checkbox"/>	SITE SECURITY	<input type="checkbox"/>	DRAINAGE CONTROL	<input type="checkbox"/>	IMPOUNDMENT STABILIZATION
<input type="checkbox"/>	REMOVAL OF DRUMS, BARRELS, ETC.	<input type="checkbox"/>	SOIL CAPPING	<input type="checkbox"/>	SOIL EXCAVATION
<input type="checkbox"/>	CONTAIN/TREAT/DISPOSE OF WASTE	<input type="checkbox"/>	CHEMICAL CONTROLS	<input type="checkbox"/>	ALTERNATIVE DRINKING WATER SUPPLIES

COMMENT:

**SUPERFUND REMOVAL SITE EVALUATION
and
REMOVAL PRELIMINARY ASSESSMENT**

VII. ADDITIONAL INFORMATION OR COMMENTS:

EPA USE ONLY

VIII. CERTIFICATION:

SIGNATURE:
POSITION/TITLE:
OFFICE/AGENCY:

DATE:

SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT (Supplemental Waste Inventory Sheet)

IX.	HAZARDOUS SUBSTANCES, POLLUTANTS OR CONTAMINANT INFORMATION:
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[illegible]